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A N  
A C C O U N T  
O F T H E  
Antient Baths;

And their U S E in  
P H Y S I C.

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Of EXETER.

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L O N D O N:

Printed for H. WHITRIDGE, at the  
*Royal Exchange.* 1752.

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A N

## A C C O U N T

O F T H E

## A N T I E N T B A T H S, &amp;c.

**B**ATHING, it is well known, was recommended by the antient Physicians to Persons of all Ages and Constitutions, as well for preserving Health, as curing most kinds of Disorders. Many of the Moderns imagine, that *macerating* in hot Water, and *sweating* in Bed afterwards, will answer all the ends and purposes of Bathing; and, if we may judge from the common practice of our Bathers, the received Opinion is intirely in their Favour. But, as I apprehend this to be a Mistake, attended with very

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bad Consequences, I shall endeavour to give a particular Account of the several parts of the antient Baths, and the different Effects produced by them.

THE Baths then, according to *Galen, Method. Medendi, lib. x. cap. 10.* consisted of four Parts. In the first of these, a Person was gradually heated, and then sweated by hot Air; and for the most part anointed and rubbed. It was called *Laconicum, Assa*, and *Assæ Sudationes*. When the Baths were more simple, they had one hot Room or Stove only, which was round, and covered with an *hemispherical* Roof. *Vitruv. de Architect. lib. v. cap. 10.* Others had two such hot Rooms, different however in degrees of Heat, the *Tepidarium* and *Caldarium*; and many three, which were placed one after the other. When there was more than one Stove, the first was used as an undressing Room, or *Apodyterium*.

THE hot Room or Rooms were heated from a Kiln or Oven underneath,  
and



and *Flues* carried from thence round about in the Walls. The Floors of these Rooms were made somewhat declining from the hot Bath, which was adjoining to the hottest Room, on purpose that Water, thrown over the side of the Bath, might run through them all to moisten the Air, when there was occasion.

AFTER sweating, and sometimes rubbing and anointing in the Stoves, it was usual to go first into the hot Bath, next into the warm Bath, and then into a cooler. The two first of these were, from their temperature, called *Caldarium* and *Tepidarium*, as well as the dry sweating Rooms already mentioned; and not only the Baths themselves, but the Rooms in which they stood had the same Names. The *Caldarium* and *Tepidarium*, where the Water was, belonged to the second part of the Baths; but the *Frigidarium*, to the third. The manner of bathing was in all these three the same: They



commonly sat down on a low Seat or Stool in the Bath, called probably from hence *Solium*, with their legs, and sometimes thighs, covered by the Water : In the mean time, the same Water was poured on their Heads and upper parts by themselves, or the Servants of the Baths, from Pitchers or Urns made for the purpose. If any part of the Body wanted to be bathed more than another, a larger quantity of Water was poured upon it; and this sometimes from a greater, and sometimes from a less Height. In some cases they came out of the hot Water to be anointed, and then went back into it again; in others they did not go into the Water at all, but sat down by the side of the Bath, and had the Water poured upon them there.

AFTER bathing in the cooler Water, they were rubbed commonly with linen Cloths, and detained in a temperate Air, either in the *Frigidarium* or elsewhere, till the Sweat intirely ceased,  
and



and there was no danger of taking cold, on going into the open Air : They were then wiped dry, anointed, dressed, and after this fourth Operation dismiss'd from the Baths.

THE several Parts of the Baths, and the manner in which they were to be used by Persons subject to *Disorders of the Head*, are mentioned by *Celsus* in the following passage, *lib. i. cap. 4. Si in balneum venit, sub veste primum paululum in Tepidario insudare, ibi ungi, tum transire in Caldarium; ubi sudarit, in solium non descendere, sed multâ aquâ calidâ per caput se totum perfundere, tum tepidâ uti, deinde frigidâ, diutiusque eâ caput quam cæteras partes perfundere: deinde id aliquandiu perfricare, novissimè detergere, & ungere.* The directions given by *Galen* for bathing Persons consumed by a *hectic Fever*, are yet more particular, *Method. Med. lib. x. cap. 10. Volo æger in balneum super lectulo deportetur, in cujus prima è tribus domo nudetur, & transferatur*



feratur in sindonem calentem, promptè in id ipsum paratum; sint autem quatuor homines qui hanc teneant, à quòque sine unus. Inde in secundam portetur. Esto autem hæc media domus non tantum situ media, sed etiam temperie, tantò scilicet primâ calidior, quantò est tertiâ frigidior. In hac domo oleum tepidum esto, quo æger super sindone illatus protinus perfundatur. Hoc factò, tertiam ingrediantur domum, ac ducant hominem ubi lavacrum est; sic autem per tres domus qui eum portent transibunt, ut in hac balnei parte paululum tantum morentur. Esto et Aër cujusque domus, nec calore nec frigore immodicus, sed ad modum temperatus, & mediocriter humidus: Hoc fiet si Aqua benè temperata ex labro sit liberaliter effusa, sic ut perfluat per omnes domus. In ipsa vero Aqua calida, sindone item sustentus, bis terve totus mergatur, nulla verò aquæ infusio adhibenda est, quâ in aliis uti solemus. Mox hinc eductus, in frigidam semel totus tingatur, at inde celerimè



*lerrime retrabatur, & aliâ Sindone tegatur, tum in Lectulum collocetur; ibi Spongiis detergatur, deinde mollibus Linteis, sed inter hæc is erit blandissimè contrectandus. Postea unctus & vestibus amictus super Lectulo in domum suam reducendus, & apto demum cibo nutriendus.*

THE third part of the Baths being called *Frigidarium*, and the Water here used *Frigida*, it is generally understood to have been constantly placed at a distance from the Fire, so as to have had no Warmth at all from it. But this is not true, for the *Kiln* or *Oven* wherein they made the Fire, was in the more regular Baths continued underneath the *Frigidarium*, which is evident from the directions for building Baths, given by *Vitruvius*, lib. v. cap. 10. *Supra hypocaustum tria Abena sunt componenda, unum Caldarium, alterum Tepidarium, tertium Frigidarium, & ita collocata uti ex Tepidario in Caldarium quantum Aquæ calidæ exisset, influeret*



*fluere de Frigidario in Tepidarium eadem ratione.* These bathing Vases being ranged one after another, in the same Directions, the fall of Water required might be easily made, if the *Tepidarium* was placed only a few Inches lower than the *Frigidarium*, and the *Caldarium* than the *Tepidarium*. The Hearth or bottom of the Kiln or Fire-place was lowest likewise at the Kiln's mouth and *Præfurnium*, and gradually ascended from thence, as it went back under the *Caldarium* first, then the *Tepidarium*, and afterwards the *Frigidarium*. The use of this was to keep the Fewel forward under the *Caldarium*, and that the Flame might more freely diffuse itself through the whole Cavity beneath the Baths. And not only from the Situation of the *Frigidarium* over the Fire-place, but also from the continuance of the Sweat which was expected after bathing in the cooler Water, as *Galen* relates, *Method. Medendi, lib. x. cap. 10.* we may certainly



certainly conclude, that the Chill of the Water and Air in the *Frigidarium* was taken off by the Fire. Yet, even then, these must have felt Cold to Persons, coming into them immediately from the hotter Parts of the Baths; from hence I suppose, and from receiving the cold Water, it had its Name. The *Arabian* Physicians likewise, as *Avicenna* informs us, *lib. i. canon. Fen. 3. Doct. 2. cap. 6.* ordered the Water of the *cold Bath* to be softened, when it was used after the *hot*. *Et est quum frigidâ lavantur, post ablutionem aquâ calidâ factam, quo exteriora fiant fortiora, calorque retineatur naturalis. Quod si voluntas affuerit ut istud fiat, oportet ne aqua multum sit frigida, imo ut sit temperata.* But as cold Water fell into the *Frigidarium*, it might be received in the bathing Pitchers from the Spout or Pipe, whenever there was Occasion to mix it with the Water of this Bath, or to use it alone; by letting in a larger

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Quantity



Quantity of cold Water, the several Baths, if too hot, were soon to be cooled.

THE *Roman Baths*, however, were not all built on the same Plan, for in some designed for private Use only, and more for the Benefit of the *healthy* than the *sick*, neither the Air nor Water of the *Frigidarium* seem to have received the least Warmth from the Fire. A Description of such is left us by the younger *Pliny*, *Ep. vi. Lib. v.* *Aliis [fenestris] despicit pratum, sed ante piscinam; quæ fenestris servit & subjacet, strepitu visuque jucundam. Nam ex edito defiliens aqua, suscepta marmore, albescit. Idem cubiculum hieme tepidissimum, quia plurimo sole perfunditur. Cobæret Hypocaustum, & si dies nubilus, immisso vapore, solis vicem supplet. Inde Apodyterium balinei laxum & hilare excipit cella frigidaria, in qua Baptisterium amplum atque opacum. Si natare velis latius aut tepidiùs, in area piscina est, in proximo puteus,*



*puteus, ex quo possis rursus astringi: si pœniteat teporis Frigidariæ cellæ connectitur media, cui Sol benignissimè præsto est, Caldariæ magis, prominet enim. In hac tres descensiones: duæ in sole, tertia à sole longius, à luce non longius. Vid. Epist. xvii. Lib. ii.*

WHAT the hanging Baths, or *Balnea pensilia* were, has been accounted a very difficult Thing to find out. See *Baccius de Thermis, & Mercurialis de Re Gymnastica*. For my own Part, I think they were no other than such as I have been describing. Any Buildings standing upon Pillars, Arches, or Vaults, the Romans called *Ædificia suspensa*. And as the Baths themselves and hot Rooms stood on small Brick Pillars, or Iron Props, or were vaulted, that the Fire and Heat might be applied every where underneath, (as may be seen in *Vitruvius*) they were properly *Balnea suspensa*, or *pensilia*. The Roman People, before *Sergius Orata*, Cotemporary of *Crassus* the



Orator, born A. U. C. DCLXXIX, introduced the *Balnea pensilia* among them, probably heated their Water in some convenient Vessel, and then removed it from the Fire, or the Fire from under it, when they bathed; or else had the hot Water carried from thence into a bathing Tub, as it is now commonly done with us in private Houses, where a hot Bath is used. Such kind of Baths, according to *Homer*, were in Use at the Time of the *Trojan War*,

Κέκλετο δ' ἄμφιπόλοισιν ἑὺπλοκάμοις κατὰ δῶμα  
 Ἀμφὶ πυρὶ σῆσαι τρίποδα μέγαν, ὅφρα πέλοιτο  
 Ἕκτορι δερμαὶ λοετρά μάλχης ἐκνοσῆσαντι.

Il. xxii.——442.

But in these simple Baths, the Heat of the Water cannot be kept up to any certain Degree, or changed as Use or Pleasure may require. Besides the gradual Increase of Heat and Sweating, before going into the hot Water,  
 and



and the agreeable *tempering* and *hardening* afterwards, are entirely wanting. These, and other Conveniencies peculiar to the *hanging Baths*, made the *Roman* People extremely fond of them, when their Use became publick, in the Times of *Pompey the Great*; being recommended by *Asclepiades*, who first of all introduced, or at least established, the Profession of Physick at *Rome*. This warlike People were so ignorant of the learned Arts, that before *Asclepiades* brought them acquainted with the *Grecian Practice* of Physick, they cured themselves by Sweating, in the same rude Manner as the simple *Blacks* and Natives of *America* have been found to do. *Asclepiadem adjuvère multa, quorum cura nimis anxiosa & rudis, ut obruendi ægros veste, sudoresque omnimodo ciendi, nunc corpora ad ignes torrendi, solesve assiduò quærendi in urbe nimborum: imò verò toti Italiæ imperatrici, tum primum pensilium balinearum usu,*



*usu, ad infinitum blandiente. Plin. Hist. lib. xxvi. cap. 3.* This Author relates of the same Physician, a little before, *balneas avidissimâ hominum cupiditate instituit.* And it is no Wonder that a People accustomed to such kind of Physick, should be vastly pleased with the *hanging Baths*, recommended by *Asclepiades*, if only on Account of the Conveniency of Sweating in the hot Rooms. *Seneca* must therefore crave some Allowance, for what he writes in his xcth Letter, as to the Time when the artificial Baths began to be erected by his Countrymen. *Quædam nostrâ demùm memoriâ prodiisse scimus---ut suspensas Balnearum, & impressos parietibus tubos, per quos circumfunderetur calor, qui ima simul & summa foveret æqualiter.* *Baccius, Mercurialis*, and others, on their Authority, have supposed, that the *Balnea pensilia* were Baths suspended by Ropes, to be swung forward and backward, like the *Lecti pensiles*. But there is little or no Reason  
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son for such a Supposition, and many Objections lay against it. *Balnea pensilia* (*Valerius Maximus* observes, *Lib. ix. cap. i. Memorabil.*) *Orata primus facere instituit: quæ impensa lævibus initiis cœpta ad suspensa aquæ calidæ, tantum non æquora penetravit.* To what Purpose, allowing it could be done, should so immense a Quantity of Water be hung up by Ropes in private Baths (as they would have us believe) for swinging a single Person? Besides the *suspensuræ Balnearum*, and the Flues in the Walls, of which *Seneca* speaks, belong undoubtedly to the same Invention, being contrived to heat the Stoves under and over. And *Vitruvius* would have the Hearth of the Fire-place under the Baths to rise gradually from the *Præfurnium*, quò *facilius flamma pervagaretur sub suspensione.* But certainly if *Asclepiades* had prescribed *swinging Baths*, as the learned *Antiquarians* abovenamed imagine, both *Celsus* and *Cælius Aurelianus* would



would have related in what Distempers, *gestationes in aqua calida* were practised.

IN some private Baths the Antients seem to have had a Contrivance like that in our modern *Bagnio's*, and by carrying two Pipes, one from a Cistern of hot Water, and the other from that of cold, into a smaller bathing Vessel, where there were Cocks; by turning this or that, the Person bathing might temper the Water he was in at Pleasure, and change the Bath gradually from hot to cold, without removing out of his Place.

THUS much concerning the Structure of the Baths; I shall next consider the different Effects of their several Parts.

By the hot Air then, all the Pores of the Body are dilated and opened, but more especially of those Parts which are most contiguous to it. At the same Time the Heart and Arteries are incited to contract themselves  
more



more frequently and vigorously : By means of which the Motion of the Blood will be accelerated, and the Flux of the Humours be more determined towards the Skin and Passages conveying the Breath : For the Arteries nearest these Parts are most stimulated to propel their Fluids, and the Ducts and Pores most open to transmit them : Consequently the Discharge of the useless excrementitious Matter, which naturally passeth off through the perspiratory Pores, will be thereby greatly increased. But besides what is effected by the vital Powers of Animals, the Moisture of all porous Bodies is extracted and absorbed by hot dry Air. On these Accounts a Man perspires most plentifully in hot dry Countries and Seasons. The Flux of Humours from the *internal* Parts of the Body to the *external*, is evident from the Redness and Swelling of the Skin, and the Increase of Perspiration in hot dry Weather, is ascertained by the statical



Experiments of *Sanctorius*, *Keil*, and *De Gorter*. From which also we are certain, that a constant and due Discharge of this subtle Excrement is absolutely necessary to the Continuance of Health; that a slight Interruption or Deficiency of it will very soon bring on a Fever, or some other Disorder; and that it is vain to expect Recovery from Sicknes without a free Perspiration.

ANOTHER Effect of hot Air is fusing and dissolving the Blood and Humours, together with such Concretions as are not too far removed from a fluid State, and disposed to dissolve by Heat; such are fat cold *Pituita*, and *crude viscid Matter*. The two last are, for the most Part, the obstructing Matter in those *chronical Distempers* where the Circulation is languid. A general Redundancy of the former is itself a Distemper, and the Cause of many others. Besides, very frequently in lean People, Surgeons meet with Tumours



mours containing a *fat oily* Substance ; from whence we may reasonably conclude, that this Kind of Matter is oftentimes the Occasion of Obstructions.

THE *Fluids*, (and probably a Part of the *Solids*) of a Dog and Cat were within half an Hour rendered more *putrid*, and consequently were more dissolved by the hot Air in a Sugar-baker's Stove, than those of a Man are by the most *malignant petechial* or *pestilential* Fever. The *colliquated Matter* was, in the mean Time, very plentifully discharged by the Dog thro' the salival Glands (owing to the particular Formation of this Creature) and had the Appearance of bloody *Ichor*. The Cat was as wet with sweating, as if drawn thro' a River. To any one who duly considers this Experiment related by *Boerhaave*, in the first *Vol. de Chemia* (275) and knows that Putrefaction so intimately dissolves the Texture of the Particles forming the different *animal* and likewise *vegetable* Substances, as to reduce them all again



to the like Principles ; it will appear that hot Air applied to all the Body *externally*, and taken into the Lungs in breathing, is by much the most powerful *Dissolvent* which Physicians have yet discovered : A greater Degree of Heat applied to the whole external Surface of the Body, whilst temperate Air is breathed, will not produce any Sign of a Tendency towards *Putrefaction*, and consequently is much less efficacious in dissolving *animal Concretions*.

FROM the incredible and destructive Power of very hot Air in dissolving and melting down living Animals, may be deduced the Effects of that which is heated in a less Degree. A gentle Heat, therefore, besides discharging the *perspirable Matter* or most subtle Excrement (consisting of a watry Vehicle, and the useless Parts of decayed and vitiated Solids and Fluids, which naturally tend to *Putrefaction*, and are now ready to become acrid) dissolves



dissolves the Texture of the Particles which are in the next State to the *perspirable Matter*, and forwards the same Change in all the Humours between this and the *Chyle*: By which Means, it greatly augments the Quantity of the *perspirable Matter*.

IF the Heat be increased, the Flux of Matter to the Skin will be more copious, and the Pores more open; and when it comes to a certain Degree, the Humours, instead of flying off insensibly, will flow so fast thro' the Skin, that the whole Body will be bedewed with Sweat. The greater the Degree of Heat, provided it is not suffocating, the greater will be both the Dissolution and the Discharge. When it was convenient to promote the Discharge by Sweat, with less Heat, the Body was, by the Ancients, wrapt up in warm Cloathing or Blankets, and bathed in its own Vapours.

*Asclepiades* depended chiefly on *cucurbitaneous Evacuations* for emptying the Vessels,




Vessels, and freeing all the Passages or Pores from Obstructions; by which most Disorders, according to his System, are produced. And *Chrysippus* with *Erasistratus* and their Followers (who believed a Fulness of the Vessels to be the common Cause of Distempers) refused to bleed or purge, because the Matter which wanted to be discharged, in every Disorder, might be better evacuated thro' the *insensible Pores*.

THESE celebrated Practitioners undoubtedly carried this Matter too far. What I would contend for, is, that the first Part of the Baths is an excellent Remedy to purge the several Series of Vessels between the Heart and *perspiratory Pores*; when the Matter which ought to perspire is diverted or retained; or when the Blood abounds with *dissolved, thin, sanious, and acrid, Humours*, as at the End of Fevers, and in many *chronical Diseases*; when the Glands, Vessels, or Pores, are *clogged, choaked up, and distended, by fat,*



*fat, cold, leucophlegmatic Viscidities,* or other Concretions dissolveable by Heat; when *watry Humours* preponderate, and are disposed to produce *dropfical Swellings*, or have already occasioned them. Besides, by *attenuating* the Humours, *accelerating* their Motion, and *widening* the Diameters of all the Vessels, it not only *discusses* Tumours arising from Obstructions *in the larger Canals*, but *forces* the more subtle Fluids through the finer Ducts, which were before *stopt* or *collapsed*, and thereby procures a free Circulation throughout the whole System.

For these Purposes was *sweating* in the hot Rooms of the Baths recommended by the most judicious Physicians amongst the Ancients, who had daily Opportunities of observing the Effects of this Remedy. *Potest autem prima Balnei pars, ubi ingredientiæ in aëre versantur calido, materias per totum corpus tum calefacere, tum vero liquare, præterea quæ inæqualia sunt, æquare,*  




& cutem rarefacere, & multa, quæ sub  
 hac detinebantur, evacuare. Galen.  
*Method. Medend. Lib. x. cap. 10.*  
 The same Author afterwards assures us,  
 that when the *first Part* of the Baths  
 is properly applied, there must neces-  
 sarily follow *Excrementorum evacuatio,*  
*æqualis per totum corpus calor, exiguo-*  
*rum meatuum rarefactio, tensorum re-*  
*laxatio, densatorum fusio.* It may not  
 be improper to observe, that *Inæqualia*  
*ἀνομολία* comprehend all Kinds of Ob-  
 structions, and so do also *tensa συντεταμένα*;  
 for whenever there is an Obstruction,  
 the Fluids pressing to pass, and not  
 being able, will *distend* the obstructed  
 Canal or Canals, and occasion more  
 or less of a Swelling and Compression  
 of the neighbouring Vessels; therefore  
 necessarily a *Tension* and *Inequality*.  
 For this Reason, *Inflammations* and  
*Swellings* of every Kind, were always  
 esteemed and treated by the Metho-  
 dists, as Diseases with *Astriction*. Af-  
 ter Obstructions it too frequently hap-  
 pens,



pens, that the Matter intercepted and impacted *thickens* and *recedes* from its fluid State, which I apprehend *πεπιλημέια* (translated by *Linacre densata*) to signify.

THE general Intent of anointing with sweet Oil in the *hot Rooms*, was to relax the solid Parts, that the *Ducts* and *Pores* might more easily give Way to the Humours, which were to pass through them. By *rubbing*, which was usually done with Oil, the *Vessels* and *Pores* were alternately and successively compressed and dilated; the Humours *forcibly* driven forward and backward, and in all Directions; the *component Particles* of both Solids and Fluids *agitated* and *impelled* against one another: The Consequence must be Increase of Heat, a larger Flux of Humours to the *Superficies*; Expulsion of the *perspirable Matter* in or near the Skin; Dissolution of *cold viscid Concretions*; Discussion of Humours, which *stagnate* and *distend*

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their Vessels, or Receptacles, without Inflammation or Tendency to it; a free and open Passage through all the Ducts and Pores, and greater Firmness of the Fibres. To render *tight* and *firm* what was *lax* and *flabby*, they advised to rub *hard*; to soften and dissolve a Hardness, *gently*; to *plump up* any Part where Flesh was wanting, *moderately*, and not long. When a Quantity of Matter was to be evacuated, or the Body eased of a general Load, the rubbing was *longer continued, oftner repeated*, and *more universally applied*. And it was then usual for several Servants to be at once employed in rubbing different Parts of the same Person. Anointing and rubbing in a warm Room, were frequently used after Exercise, instead of the Bath; the Manner in which this *Apo-therapia* was performed, is accurately described by Galen. *de Sanitat. tuend. Lib. iii. cap. 2.*

WHEN



WHEN the Motion of the Blood had been *gradually quickened*, the gross Humours *attenuated*, the thick Juices *dissolved*, the perspiratory Matter *discharged*, the Vessels *unloaded*, and the narrower passages *opened and cleared* by the first Part of the Baths; a Person was properly prepared for a greater Rarefaction and Agitation of the Fluids and Solids in the *second*, which was *much hotter* than the *first*. For no one can live for any considerable Time in Air, which is heated to 90 Degrees by *Farenheit's* Scale; but a Man accustomed to *hot bathing* may easily continue for Hours together in Water, that is above 110. Our *Bath-Waters*, as I have been informed by the ingenious Dr *Davies*, are at the hot Springs 116; and in the more temperate Parts of the hot Baths from 111 to 100 (being more or less cooled by the Weather). In the *Cross Bath* the Heat in *September* is about 93.



THE intense Heat of the *hot Baths*, when People *rashly* and *suddenly* expose themselves to it, oftentimes proves fatal; by bringing on Fevers, Pleurifies, Inflammations of the *Viscera* and Apoplexies. To prevent such Accidents, Physicians have now recourse to *bleeding, purging, cooling Diet, and attenuating Medecines*. *Essay on the Use and Abuse of warm bathing by Dr Oliver, p. 18, &c.* This Preparation is evidently more *tedious* and *disagreeable* than that recommended by our Predecessors, if not *less safe*.

WHEN the Water of the Bath is *very hot*, it shuts up the Pores, so that neither the Moisture can *enter*, nor the perspirable Matter *escape* through them. *Balneis, si aquæ justò calidiores fiant, vis quidem calida inest, sed non perinde humida. Quippe horrere corpora, contrahique exiles eorum meatus subigunt, ita ut nec madescere ab extrinsecus accedente humore possint, nec excrementi quod intus latet quicquam emittere.*



*emittere. Galen. de Sanit. tuend. Lib. iii. cap. 4. Sanè cogit clauditque tum frigida tum fervens aqua. Ibid. cap. 8.* But though both *hot* and *cold Water* condense the Skin, and shut up its Pores, yet their Manner of doing it is *very different.* For *cold Water*, by bringing the *constituent Particles* of the Fibres or solid Parts nearer together, *contracts* and *closes* the Ducts and Pores of the Skin; whereas very *hot Water* draws such a Quantity of Humours to the Surface of the Body, that the *cutaneous Vessels* are overcharged and choaked by the Matter forced into them. In this Case the Skin will appear *swollen, tense, and inflamed*; in the other *shrivelled, rough, pale, or livid.*

THE Use made of a *very hot Bath*, was to draw the Humours, as it is done by a Cupping-Glass, from the *inner Parts* of the Body to the *outer*; to scatter and diffuse the same, when *accumulated, extravasated, or stagnating*



nating any where, within or below the common *Integuments*; if there was no Fullness of the Vessels, nor fear of an *Inflammation*; to drive the more *subtle Fluids* into the *finer Ducts* and *nervous Tubes*, and to procure a free Passage through them. By these Means, as I apprehend, *hot bathing* is useful in restoring *wasted paralytic Parts*. *Vid. Cæl. Aurelian. de morbis Chron. Lib. ii. §. 32.* especially if Care be taken to brace the *Fibres* afterwards; which otherwise, as soon as the Distension from the Heat ceases, will be much *relaxed* and *weakened* by it. And in this View *warm bathing* cannot but be prejudicial to *Paralytics*. I am speaking only of bathing in *common Water*, which has no peculiar Virtues from *saline, sulphureous, or metallic Principles*; for such, by their *astringent Quality*, may contract the Solids, more than the *hot Water* relaxes them. It is notorious that *hot Seawater* and *aluminous Waters* were particularly



particularly recommended in *paralytic Cases*, on this very Account. The *Albulæ*, near *Rome*, used by *Augustus Cæsar* (as well as Sea-water) for a Weakness and Relaxation of the Nerves, are of the *Aluminous Kind*.

*At quoties nervorum causâ, marinis albulisque calidis utendum esset, contentus hoc erat, ut insidens ligneo solio,---manus ad pedes alternatim jactaret. Sueton. de Cæsar. August. cap. 82.* Whether or no, by bracing the Fibres, with proper Applications after bathing, our Bath-waters may be rendered more efficacious in curing *paralytic Weaknesses*, I shall leave to the Determination of those Physicians, who are better acquainted with their Virtues. But let me in the mean Time observe, that the Success of warm bathing in *paralytic Disorders* is not so fully proved, by the Account of Patients admitted into the *Bath-Infirmery* under such Circumstances, as Dr *Summers* seems to imagine. And this, I presume, will appear, on comparing



paring that Account with the following; copied from the Register of the *Devon and Exeter Hospital*, (in which, for some particular Reasons, *warm bathing* has not been much used) and allowing for the Difference of *obstinate Cases* sent, after trying all other Means, to the *Bath* for Relief.

*Palsies admitted into the DEVON and EXETER HOSPITAL---*104.

Cured	40	} 104
Received great Benefit	28	
Discharged for Non-Attendance	4	
Irregularity	1	
At their own Request	5	
As incurable	20	
Dead	6	

*Paralytic Disorders admitted--*31.

Cured	27	} 31
Received great Benefit	1	
Discharged at their own Req.	3	

BUT



BUT to proceed; the *Athletæ* and Persons inured to long and violent Exercise were bathed in *very hot Water* after it, to prevent and cure Weariness, owing to a Retention of the Humours in, or about, the Muscles, Tendons, and Joints of the exercised Parts; where they were forced into the finer Tubes, and expressed thro' the Sides of the Vessels by the Contractions of the Muscles.

WATER, *moderately hot*, softens the Skin, dilates the Pores, plentifully insinuates itself thro' the bibulous Veins and Interstices of the Fibres, dilutes the Humours, moistens the Solids, and consequently more relaxes and effeminates the Body than hot Air. It more readily dissolves saline and other Concretions, which easily mix with Water; but doth not dissolve the Substances above-mentioned, like hot dry Air.

It increaseth the Discharge thro' the Skin, but *generally* adds as much (if not more) to the Fluids, as it takes from

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them. The Effects, therefore, of *the Second Part* of the Baths are very different from those of the *First*; and, in several Respects, contrary to them. When the more fluid and watry Parts of the Blood have been too much exhausted, and the Solids are dry, tense, and hard, from Heat, Exercise, or Disease, *this* is principally recommended. And it was not without good Reason, that in the Baths the Use of *hot Water* succeeded Sweating in the dry Stoves.

THE *warm Bath* was commonly interposed between the *hot* and the *cool*, to prevent a too great and sudden Change; and weaker Patients had frequently the *cooler* Water mixt with the *warm*, by Degrees, before the *cooler* was poured on by itself.

THE Use of the *third Bath* was to allay the Heat, prevent the Danger of taking Cold, contract the Pores and Vessels to their proper Dimensions, brace the Fibres, and give all Parts of  
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the Body due Strength and Vigour. The component Particles of *animal Solids*, as well as of *Iron*, are more closely compacted, and their Texture therefore rendered firmer and harder, if they are relaxed by *Heat* before they are constringed by *Cold*. On this Account partly, Persons using the *cold Bath* without the *hot*, were advised to warm themselves by Exercise before they plunged into the Water. But to *soften Metals*, they are to be *beated*, and then *cooled* gradually; the *slower* they cool, the *softer* they will remain afterwards. And nothing, that I know of, will so much *relax* our Fibres, and render our Flesh *loose* and *flabby*, as bathing in *warm fresh Water*, and macerating in Bed afterwards, in the *hot moist Steams* of one's own Body, till the Heat and Sweat are gone. The *cooler Water* besides, by contracting the Vessels and expressing a Part of the Water before imbibed, contributes to the Sweat expected in the



last Part of the Baths, and promotes the Discharge by Urine. What Opinion the *Antients* had of it, we may learn from *Galen*, who is thus interpreted by *Linacre*: *In tertiâ Balnei parte refrigerantur innoxie, quæ fuerant excalescæta, & vires firmantur; si quæ verò & rarefacta, & plus justo sunt laxata, ea in naturalem redeunt mediocritatem; id quod quarta Balnei pars indicat. Quippe quibus omnia ritè sunt adhibita, ii post frigidæ usum adhuc sudant, & omnia ipsis excrementa vacuantur. Itaque, ex omnibus* *m* *quæ de Balneis retulimus, una summa colligitur, quòd vacuatur quidem, quicquid in corpore vel fuliginosum vel fumidum fuit, (that is all the excrementitious Matter, capable of exhaling or passing thro' the Skin) consistunt autem in naturali symmetria tum caro ipsa tum cutis; solidarum partium ariditas corrigitur, & calor, non modo is qui ex lavacro accessit, verùm etiam qui prius fuit,*



*fuit, ex frigida usu submovetur. De Method. medend. Lib. x. cap. 10.*

As to the *Manner* of bathing, it may be proper to observe, when a Man stands in Water up to his Breast or Chin, the *lower Parts* will be considerably *compressed* by the Weight of the Water, and the Blood therefore *more forcibly* driven upon the *upper Parts* and *Brain*, than it is when Water is poured upon him *sitting*.

MOREOVER in disposing the *several Parts* of the Operation, it was judiciously contrived that the *preceding* should be preparatory to the *following*, and that the *latter* should correct any Excess occasioned by the *former*. Every Person therefore using the Bath, generally went through *all Parts* of it, but staid a *longer* or *shorter* Time in each, according to the *different Nature* of his Constitution and Disorder. And for *particular Cases*, the Baths *throughout* were heated *more* or *less* than usual. By *these Means* bathing was made



made to answer the *principal* Intentions of Cure in most Disorders. Any one desirous of seeing a List of *Distempers*, which were cured by bathing, may consult *Baccius de Thermis, Lib. vii. c. xix. &c.* But this *Author* did not *well* understand, or hath not *sufficiently* explained, the *different* Management of this Operation in *different* Constitutions and Disorders. To *relax*, for Instance, and *soften* tense and rigid Fibres, with a *meagre* Habit of Body, the Patient was detained *for some Time* in the *warm* or *moderately hot* Bath, but *quickly* passed thro' the sweating Rooms ; where he was *plentifully* anointed, and only rinsed himself with the Water of the *last* Bath. When the Fibres, on the contrary, were *weak* and *lax*, and the Habit full of Moisture, his Stay was *short* in the *second Part* of the Baths ; but he was *well* sweated and rubbed in the *first*, and had a *larger* Quantity of *colder* Water poured upon him in the *third*.



IN many Cases, therefore, *Celsus*, *Cælius Aurelianus*, *Galen*, and the *Greek Physicians*, his Successors, thought it not enough to recommend bathing *in general*, but have specified *what Parts* of it should be *more or less* used, and *what Degree* of Heat is most proper. Those who have considered the Effects produced by the *several Parts* of the Baths, and are likewise acquainted with the Principles of the above-mentioned Authors, relating to the *Causes* and *Nature* of Diseases, will easily be able to account for their *particular* Precepts, relating to bathing; and (what is more to the Purpose) to make the *best Use* of this Remedy, where it is within Reach.

THE *usual Time* for bathing was, when the Vessels were *most empty*; therefore before the principal Meals, and after Exercise. But *sometimes*, in order to draw Nourishment towards the Skin, and plump up the Flesh, they made use of some light nourishing Food;



Food ; before they bathed, or in the Baths.

BATHING was forbid by *the most judicious* Practitioners, where any of the Viscera were *unsound* or *weak*, so as to be in Danger of receiving Hurt from a *considerable Rarefaction* of the Humours, and a *greater Impetus* of the Blood ; or when the *cutaneous Vessels* and *Ducts* were constringed and choaked up by a Load of Matter, or fizy Humours ; as in the Beginning of Fevers, and during the Increase of their *Paroxysms* ; or when there was any *considerable* Inflammation, or when the Veins were turgid and distended with Blood ; or when the Stomach was *full*, or when the *Chyle* was *plentifully* mixed with the Humours. But in every Case whatsoever, if a Person, on going into the *sweating Rooms* or the *hot Water*, happened to be *shivered*, or was about to be so (which was known, from the Skin about the Temples, instead of growing *soft* and *moist*, becoming *tense*,  
*hard*,



*hard, and dry,*) he was not permitted to proceed any farther, but immediately anointed and sent Home.

UPON the Whole then, the Operation of bathing was *skilfully* contrived, *cautiously* managed, and *happily* applied by the antient Physicians, to purge the Vessels, Glands, and Receptacles, from all *useless, vitiated, or noxious* Matter, capable of being discharged by the cutaneous Pores, or urinary Passages; to attenuate and dissolve *crude, viscid, thick, or inspissated* Humours, and then expel them; to unload the Body of *fat and superfluous* Juices, or to draw Nourishment to the Parts where Flesh was wanting; to brace or relax the *Fibres*, as there was Occasion; to procure a *free* Passage for the *Humours*, and a proper Flow of them; in short, to answer, in most Cases, with the Assistance of Diet and Exercise, the principal Intentions of Cure, and reduce both Solids and Fluids to the *most exact* Standard

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ard of perfect Health. Of *such* Con-  
sequence, and in *such* Credit, were  
these three Remedies, that the Manage-  
ment of *them alone*, from the Time of  
*Herodicus* (who is mentioned by *Hip-  
pocrates*) to the general Extinction of  
the learned Arts by the *Barbarians*,  
constituted a *distinct* Branch of Physic,  
called *Iatraliptice*, which not only  
promised Health, but likewise Colour,  
Habit, Vigour, and Strength.

F I N I S.









